

REMARKS

By this Amendment, various clarifying corrections have been made in the specification. In the claims, independent claim 1 has been amended for clarity. Other dependent claims have also been amended consistent with the changes to independent claim 1 and/or for clarity. It is submitted that the present application is in condition for allowance for the following reasons.

In *section 1* of the Detailed Action, the drawings were objected to under 37 CFR 1.84(p)(4) because the noted reference numbers were used to designate two identified elements. However, it will be appreciated that the two elements were really the same, but that different, albeit equivalent, terms were used to describe the same element in the specification. Therefore, by this Amendment, the specification has been amended in a self-evident manner to use consistent terms and thus to avoid this problem and overcome this objection. It will also be appreciated that other corrections of a self-evident nature have been made to the specification as shown.

In *section 2*, the drawings were also objected to under 37 CFR 1.84(p)(4) because the noted groups of reference characters were used to designate the same elements. However, this objection is not understood. The noted groups of reference characters identify different elements, such as upper surface 28 of bottom 16, upper surface 38 of blade 21, and upper surface 44 of lower wall 41. While such different elements may have the same descriptive name, there is no prohibition against this in the rules as long as what is described is clear - and the specification and drawings make clear to those of ordinary skill that different elements are being described and

• depicted. Therefore, it is submitted that this objection to the drawings is not proper and should be withdrawn.

In *section 3*, the drawings were objected to under 37 CFR 1.84(p)(4) because it was asserted that not every feature of the claims was shown in the drawings. Taking each specific assertion in turn, it will be appreciated that the drawings objection should be withdrawn for the following reasons.

- Insofar as the assertion that a cooling element as claimed in claim 10 was not shown, it will be appreciated that claim 10 has now been amended to claim a heat exchanging means, which encompasses the heating means shown (as well as a cooling means, described but not shown and thus not now specifically claimed).
- As to the assertion that the heating element of claim 9 and cooling element of claim 10 were not shown, it will be appreciated that claim 9 has been amended to claim a heating "means", which heating means is schematically depicted and with referenced with number 30 in figure 1. And such a heating means is also generically a "heat exchanging means" as now claimed in claim 10 in place of the "cooling element" which is described but not shown.
- With respect to the assertion that the motor, stator and rotor of claim 1 are not depicted, it will be appreciated that the specification specifically recites that

The means 12 and the propeller 11 then form a stator, located outside the working chamber, and a rotor, respectively, of one and the same motor (see page 5, lines 29-31).

- Thus, stator 11 and rotor 12 make up the claimed motor, and all these elements are shown in figure 1.
- With the appreciation that stator 11 is thus shown as noted above, the further feature that the stator is located outside of the working chamber (or enclosing boundary structure) will be evident from figure 1 as well.
- With respect to the propeller resting on supports as claimed in claims 6 and 8, reference is made to the original claims in which identifying numbers were used to reference the elements so that reference to the drawings shows that the following identified elements are shown as required:
 - claim 6 - the support (16) provides the support surface (28); and
 - claim 8 - the support (48) supports the shelf 40 having a lower wall (41).
- Finally with respect to claim 11, a stator producing a magnetic field is shown as noted above as element 11.

Therefore, for all of the foregoing reasons, it is submitted that the objection to the drawings contained in *section 3* should now be withdrawn.

In view of all of the above, it will be appreciated that the drawings corrections required in *section 4* of the action is not required as no drawings changes were needed to overcome the various drawings objections.

In *section 5*, the examiner noted the layout guidelines "suggested" for applicant's use. However, as the present specification does include most of the noted sections, albeit without headings, and as such guidelines are merely "suggested", applicant respectfully declines to make any non-substantive revisions.

• In *section 7*, claim 1 was rejected under 35 USC § 112 for containing subject matter which was not described in the specification sufficiently to convey possession by the inventor. Initially, it will be noted that the subject matter specifically questioned by the examiner are mechanical expedients readily understood by those of ordinary skill, so it may be that the examiner meant to object more particularly to the terms used in some cases as noted below. The specific rejections will now be addressed in the order of appearance in this section.

- The examiner noted the recitation in claim 1 of "at least one envelope delimiting the inside of the working chamber". By this Amendment, this limitation of claim 1 has been amended to recited a "vessel" including (inherently) "at least one "enclosing structure", this enclosing structure "defining" on an inside thereof a working chamber". The change of "envelope" to "enclosing structure" has been made as the term "envelope" is not as commonly used in US practice, though it means the same thing, and this may have been the source of the rejection. The use of this substitute term is also supported since the examiner equated the use of "envelope" to "housing" (see section 10), which is also equivalent to the term "enclosing structure" - with "housing" not being used because this term was already used in the specification to define the pocket in which the motor is located. Finally, it will be appreciated that the term now used is also consistent with the specification and drawings, as would be readily appreciated by those of ordinary skill. To clarify the use of this new term in the specification, it will also be appreciated that the terms envelope and enclosing structure have been equated at the beginning of the specification with the present amendment. In view of these changes, it is submitted

- that those of ordinary skill would fully recognize that applicant was in possession of the claimed invention.
- With respect to the objection to claim 3 (not "2") of the language "means for indexing", the term "indexing" is regularly used in the mechanical arts to refer to predetermined positioning. Thus, as the remainder of claim 3 clearly recites that this "indexing means" is concerned with "a position of the propeller with respect to a support surface located in the working chamber", it is submitted that those of ordinary skill would have no doubt that applicant was in possession of such an indexing means in the form of cavity 25 and projection 27 (especially as the indexing means is recited in the specification as including these elements - see page 7, lines 4-7).
- With respect to the objection to claim 5 with the language "rests freely", claim 5 has been amended to recite that the propeller rests freely on the (previously recited) support surface. This claim is directed to the embodiment of figures 1-2, and this feature is described in the specification at page 5, lines 17-18. Thus, it is submitted that those of ordinary skill would readily appreciate that applicant was in possession of the described and depicted limitation as now more clearly recited.

In *section 8*, claims 7 and 8 were initially rejected under 35 USC § 112 for not providing an enablement of the upper and lower walls. This rejection is not understood. Is the examiner suggesting that those of ordinary skill would not know how to provide a shelf in an enclosure with upper and lower walls with a propeller located therebetween? Such a simple mechanical expedient is well within the skills of even those of less than ordinary skill in the art. This is especially true considering the last two paragraphs of

~page 8 at least with respect to claim 7. With respect to claim 8, this claim has been amended to clearly recite the embodiment of figure 4, where the shelf rests freely on a shelf support, so there should be no question that this is also within the skill of the routineer. Therefore, for all of the foregoing reasons, it is submitted that claims 7 and 8 are enabled by the present specification and drawings.

In *section 8*, claims 9 and 10 were also rejected under 35 USC § 112 for not providing an enablement of heating and cooling elements. By this amendment, (and as already noted above) claim 9 has been amended to recite "heating means" in place of "heating elements" while claim 10 has been amended to claim a generic heat exchanging means. Thus, it is submitted that those of ordinary skill would readily find enablement of some heating means, particularly as electrical resistors are recited in the specification as a possible heating element and hence heating or heat exchanging means. Therefore, the rejection of claims 9 and 10 should now be withdrawn.

In *section 10*, claims 1, 9, 10 and 12 were rejected under 35 USC § 112 for being indefinite. By this Amendment, claim 1 has been amended to clearly recite the elements of the motor and the use of "housing" as noted above. In addition, the revisions to claims 9 and 10 discussed above and the self-evident revision to claim 12 (see also below discussion of the construction of the rotor) obviate the particular objections thereto. However, it is believed to be important to note that the examiner is evidently suffering under two misconceptions with respect to claim 1.

The first misconception evidenced in *section 10* relates to the structure of the propeller, as the examiner questions whether the rotor is one piece with the "fan", or is the fan and rotor two pieces. The quick answer is "yes", as the propeller can be

constituted both (1) as a hub 20 with a magnet 24 inside (as repeatedly described and depicted) or alternatively (2) as an "electrically conducting material" (see page 7, lines 19-24). Claim 1 thus allows both disclosed embodiments to be covered.

The second misconception evidenced in *section 10* relates to the examiner's statement that

the location of the stator outside of the working chamber does not facilitate a proper working structure and to further prosecution the examiner will **assume** that the stator is to be located within the working chamber. [emphasis added]

As clearly stated in the specification, the invention is directed to a vessel without any infractuousity (infractions or penetrations) in the enclosing structure (envelope). This construction thus allows for an easy and rapid cleaning of the working chamber. Thus, it is an important feature of the present invention that the coupling between the stator and rotor is made across the enclosing structure with no (physical) penetrations. A rotating magnetic field, even when created outside of the enclosing structure, will effect a rotor inside of the enclosing structure if the rotor is sufficiently close (and/or the field is sufficiently strong). Thus, the clearly recited and claimed feature of the separation of the stator and rotor by the enclosing structure is a proper working structure and the examiner was incorrect in assuming that the stator would be placed in the enclosing structure despite the clear wording and rationale for placing the stator outside of the enclosing structure.

In *section 12*, independent claim 1 and dependent claims 2-8 and 11-12 were rejected under 35 USC § 102 as being anticipated by the Umeda patent. However, for the following reasons, it is submitted that these claims are all allowable over this reference.

As noted above, the examiner incorrectly interpreted independent claim 1 as requiring a stator inside of the working chamber or enclosing structure, and it is obvious that this interpretation was used in making this art rejection. It will thus be appreciated that the Umeda patent discloses a fan motor in a fan housing having a reduced height motor comprised of a stator 40 and a rotor 18 to which fan blades 32 are attached. However, such a disclosure is quite different from the present invention where the stator of the motor is located outside of the vessel's working enclosure defined by the enclosing structure (not the motor housing) and a rotor located inside of the working chamber.

As there is no disclosure nor teaching in the Umeda patent of providing a working chamber with a rotor/fan inside and a driving stator outside, it is evident that amended independent claim 1 is neither disclosed nor made obvious by the Umeda patent and thus should be allowed. For these same reasons, it is submitted that claims 2-12 dependent from claim 1 are similarly allowable.

It will also be appreciated that the specific limitations contained in dependent claim 2, 6, 7 and 8 are also neither disclosed nor made obvious by the Umeda patent so that these claims are additionally allowable for this reason.


In *section 14*, it was indicated that dependent claims 9 and 10 contained allowable subject matter, so that these claims would be allowable if rewritten to

overcome the other objections. However, in view of the allowability of claim 1, it is submitted that these claims are allowable without being rewritten in independent form.

For all of the foregoing reasons, it is submitted that the present application is in condition for allowance and such action is solicited.

Respectfully submitted,

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ATTACHMENT B

Marked Up Replacement Paragraphs

At the following locations, a marked up copy of the replaced paragraph is provided.

Page 1, lines 1-10.

The present invention relates to a working enclosure, of the type comprising at least one envelope (or enclosing structure) delimiting (or defining) the inside of a working chamber, and at least one fan for making the atmosphere of the working chamber move, the fan comprising a propeller, which is placed inside the working chamber in order to rotate about a geometrical axis of rotation, and a motor with a rotating magnetic field comprising a rotor mounted so as to rotate with the propeller as one piece and made to rotate by the rotating magnetic field.

Page 4, lines 28-33.

The means 12 are housed, under the lower wall or bottom 16 of the inner envelope 5, in a housing 13 made in the thermal insulation 6 and in the outer envelope 4 in order to allow access to these means 12 from the outside of the chamber 1. The vertical axis A is substantially ~~centred~~centered with respect to the bottom 16.

Page 5, lines 12-15.

A projection 27 of complementary shape 27 ~~to cavity 25~~ is provided in the ~~centre~~center of the upper surface 28 of the bottom 16 of the inner envelope 5. This projection 27 is oriented upwards.

Page 6, lines 6-11.

The bottom 16 then sends the flow of air laterally outwards above the heating elements means 30 (such as heating elements). The flow of air is then deflected upwards by the side walls 32 of the inner envelope 5, then circulated along the upper wall 34 towards its centrecenter, and finally, it descends back towards the propeller 11.

Page 6, lines 16-22.

Thus, the fan 10 creates a forced convection in the working chamber 7 making it possible to provide satisfactory heat transfer between the heating elements means 30 and the atmosphere of this working chamber. In particular, this forced convection makes it possible to attain satisfactory homogeneity within the working chamber 7.

Page 6, lines 36-39.

In addition, the structure of the fan 10 does not require any ~~infractuosity~~ infracture to be created in the walls of the inner envelope 5 which would also hamper the cleaning operation.

Page 7, lines 1-7.

When the cleaning of the working chamber 7 is finished, it is enough to place the propeller 11 back in the centrecenter of the bottom 16. The complementary reliefs (cavity 25 and projection 27), which form indexing means, making it possible to position the propeller 11 in the centrecenter of the bottom 16.

Page 7, lines 15-17.

According to a variant not shown, the reliefs (cavity 25 and projection 27) are removed, the ~~centring~~centering being provided automatically when the means 12 are activated.

Page 7, line 37 to page 8,, line 6.

According to another variant illustrated in Figure 3, the blades 21 each have an "aircraft wing" profile with a substantially horizontal lower surface 37 and an upper surface 38 with concavity directed downwards. Each upper surface 38 of blade 21 is therefore inclined at least partly with respect to the axis A. On rotation of the propeller in the direction of arrow 31, a partial vacuum will be created above the upper surfaces 38 of the blades 21 tending to lift the propeller 11.

Page 8, lines 30-37.

The lower face 26 of the hub 20 of the propeller 11 rests on the upper surface 44 of the lower wall 41. Indexing reliefs ~~25 and 27~~, such as cavity 25 and projection 27 ~~these~~ described above, are provided on the one hand on the lower face 26 of the hub 20 and the upper surface 44 of the lower wall 41, and on the other hand on the upper face 45 of the hub 20 and on the lower surface 46 of the upper wall 42.

Page 9, lines 11-14.

The means 12 for creating a rotating magnetic field comprise elements 49 placed in the thermal insulation 6 at the same level as the shelf 40, substantially at the ~~centre~~center of each side wall 32 of the inner envelope 5.

Abstract (last) Page , lines 5-17.

This working enclosure ~~(1) comprises~~includes at least one envelope ~~(5)~~ delimiting the inside of a working chamber ~~(7)~~, and at least one fan ~~(10)~~ for making the atmosphere of the working chamber move. The fan ~~comprising~~includes a propeller ~~(11)~~, placed inside the working chamber in order to rotate about an axis of rotation ~~(A)~~, and a motor with a rotating magnetic field ~~comprising~~includes a rotor mounted so as to rotate with the propeller as one piece and made to rotate by the rotating magnetic field. The propeller forms the rotor and rests on a support surface ~~(28)~~ located in the working chamber ~~(7)~~.

~~Figure 1.~~

ATTACHMENT D

Marked Up Replacement Claims

Following herewith is a marked up copy of each rewritten claim together with all other pending claims.

Following herewith is a marked up copy of each rewritten claim.

1. (twice amended) A working enclosure, comprising:
a vessel having at least one envelope-enclosing structure delimiting defining on an the
inside of said enclosing structure of a working chamber, and at least one fan for
making the atmosphere of the working chamber move, the fan comprising a
propeller, which is placed inside the working chamber in order to rotate about a
geometrical axis of rotation, and

a motor with a rotating magnetic field comprising

(a) a stator located outside of the working chamber, and

(b) a rotor mounted so as to rotate with the propeller as one piece and made to
rotate by the rotating magnetic field, wherein the propeller forms the rotor
being part of a propeller, said propeller being located inside of the working
chamber and rotating about a geometrical axis of rotation as said rotor is
rotated by the rotating magnetic field to thus move an atmosphere of the
working chamber.

2. (twice amended) An enclosure as claimed in to Claim 1, wherein the propeller
comprises blades, the having upper surfaces of which are inclined at least partially with
respect to its axis of rotation in order to produce a local partial vacuum above the
propeller, tending to lift itsaid propeller.

3. (twice amended) An enclosure as claimed in Claim 1, further comprising means for
indexing the a position of the propeller with respect to the a support surface located in
the working chamber.

4. (twice amended) An enclosure as claimed in claim 1, characterized wherein the propeller rests on a support surface located in the working chamber.

5. (twice amended) An enclosure as claimed in Claim 4, wherein the propeller rests freely on at least one said support surface located in the working chamber.

6. (twice amended) An enclosure as claimed in Claim 5, wherein the propeller rests directly on the said a support bottom wall of the enclosing structure which bottom wall provides said support surface.

7. (twice amended) An enclosure as claimed in Claim 4, further comprising at least one shelf placed located in the working chamber, the shelf comprising a lower wall and an upper wall between which said walls the propeller is housed, and wherein the lower wall provides ing the said support surface.

8. (twice amended) An enclosure as claimed in Claim 7, wherein the propeller shelf rests freely on at least one shelf support located in the working chamber; ~~and the propeller rests on the support via the lower wall of the shelf.~~

9. (twice amended) A working enclosure as claimed in claim 1, further comprising at ~~least one element~~ a heating means for heating the atmosphere of the enclosure of the working chamber.

10. (twice amended) A working enclosure as claimed in claim 1, further comprising at ~~least one element~~ a heat exchanging means for changing a temperature ~~cooling of~~ the atmosphere of the working chamber.

11. (twice amended) An enclosure as claimed in claim 1, wherein the stator is ~~a stator for producing a~~ the rotating magnetic field ~~in order to make the propeller rotate.~~

12. (twice amended) An enclosure as claimed in claim 1, wherein the ~~propeller~~rotor comprises at least one permanent magnet.